

What is claimed is:

1. A micro-particle array analyzing system comprising:

a vessel holding at least a magnetic micro-particle and/or at least a non-magnetic micro-particle;

introducing means for introducing a sample and a solution into the vessel; and

a position-control means disposed outside of the vessel for magnetically controlling a relative position of the magnetic micro-particle with respect to the vessel,

wherein the magnetic micro-particle and/or non-magnetic micro-particle are included in a given sequence within the vessel.

2. The micro-particle array analyzing system according to Claim 1, wherein the non-magnetic micro-particle has a probe immobilized to a surface thereof, and is included in the vessel to be sandwiched between the magnetic micro-particles.

3. The micro-particle array analyzing system according to Claim 1, wherein a plurality of magnetic micro-particles are used and at least one of the magnetic micro-particles has a probe immobilized to a surface thereof.

4. The micro-particle array analyzing system according to Claim 2, further comprising:

a detector for detecting a bond between the probe and organism-related molecules included in the sample; and

an analyzer for analyzing results of detection.

5. The micro-particle array analyzing system according to Claim 1, wherein the position-control means is a magnet member movably provided outside of the vessel.

6. The micro-particle array analyzing system according to Claim 1, wherein the position-control means is an electromagnet provided outside of the vessel, and the electromagnet controls capturing to the electromagnet, and dissociation from the electromagnet of the magnetic micro-particle depending on variation of magnetic field to be generated.

7. The micro-particle array analyzing system according to Claim 1, wherein the vessel has branched channels inside, the magnetic micro-particle and/or the non-magnetic micro-particle are included in one of the branched channels, and the given magnetic micro-particle and/or the given non-magnetic micro-particle are taken out from an opening end of one of other channels.
8. The micro-particle array analyzing system according to Claim 1, further comprising:
 - a transport mechanism for transporting particular molecules in a sample by collecting the magnetic micro-particle and/or the non-magnetic micro-particle being taken out from an opening end of the vessel; and
 - an electrophoresis apparatus connected to the transport mechanism.
9. The micro-particle array analyzing system according to Claim 1, further comprising:
 - a transport mechanism for transporting particular molecules in a sample by collecting the magnetic micro-particle and/or the non-magnetic micro-particle being taken out from an opening end of the vessel; and
 - a mass spectroscope connected to the transport mechanism.
10. A micro-particle array kit comprising:
 - a vessel holding at least a magnetic micro-particle and/or at least a non-magnetic micro-particle;
 - a magnet member disposed outside of the vessel; and
 - a probe binding to a particular molecule and being immobilized to any one of positions inside the vessel,wherein the magnetic micro-particle and/or non-magnetic micro-particle are included in a given sequence within the vessel.
11. The micro-particle array kit according to Claim 10, wherein the probe is immobilized to the non-magnetic micro-particle.

12. The micro-particle array kit according to Claim 10, wherein the probe is immobilized to the magnetic micro-particle.

13. The micro-particle array kit according to Claim 10, wherein the vessel is a channel provided in a capillary or a substrate.

14. A chemical-analysis method comprising the steps of:

disposing a vessel including a probe specifically binding to particular molecules and at least a magnetic micro-particle and/or at least a non-magnetic micro-particle arrayed in a given sequence;

introducing a sample and a solution including the particular molecules into the vessel;
controlling a position of the magnetic micro-particle using a magnet member disposed in an exterior of the vessel; and

detecting a result of bonding between the particular molecules and the probe.

15. The chemical-analysis method according to Claim 14, wherein the probe is bonded to the magnetic micro-particles.

16. The chemical-analysis method according to Claim 14, wherein the probe is bonded to the non-magnetic micro-particles, and in a step of being included in the vessel the non-magnetic micro-particle is included in the vessel being sandwiched between the magnetic micro-particles.

17. The chemical-analysis method according to Claim 16, further comprising a step of:
collecting the magnetic micro-particle and/or the non-magnetic micro-particle, wherein
in a step of controlling a position of the magnetic micro-particle, the magnetic micro-particle is relatively moved with respect to the vessel by motion of the magnet member relatively with respect to the vessel, and

in a step of collecting, the magnetic micro-particle or the non-magnetic micro-particle are taken out from an opening end of the vessel by motion of the magnetic micro-particle, and then collected.

18. The chemical-analysis method according to Claim 15, further comprising a step of:
collecting the magnetic micro-particle and/or the non-magnetic micro-particle, wherein
in a step of controlling a position of the magnetic micro-particle, capturing and
dissociation of the given magnetic micro-particle by an electromagnet is controlled by
controlling magnetic field of the electromagnet using the electromagnet as a magnet member,
and

in a step of collecting, after being captured with the electromagnet the given magnetic
micro-particle is dissociated, and conveyed by a flow of a solution caused inside the vessel, and
then is taken out from an opening end of the vessel to be collected.